Biochemistry and Cell Biology

Biochimie et biologie cellularie

Contents
Volume 78, 2000

Sommaire
Volume 78, 2000

Number 1 / numéro 1

ARTICLES

B.J. Crawford, C.L. Reimer, and T. Pang Localization and partial characterization of a molecule found in the plasma membrane of starfish and sea urchin embryos using a novel monoclonal antibody 1

Su Yang, Martha Hardaway, George Sun, William L. Ries, and L. Lyndon Key, Jr. Superoxide generation and tyrosine kinase 11

Jean-Michel Girardet, Franck Saulnier, Jean-Luc Gaillard, Jean-Paul Ramet, and Gérard Humbert Camel (*camelus dromedarius*) milk PP3: Evidence for an insertion in the amino-terminal sequence of the camel milk whey protein 19

Margarita D. Apostolova, Iordanka A. Ivanova, and M. George Cherian Signal transduction pathways, and nuclear translocation of zinc and metallothionein during differentiation of myoblasts 27

Nicholas R. Glover and Alan S. Tracey The phosphatase domains of LAR, CD45, and PTP1B: Structural correlations with peptide-based inhibitors 39

Claudio Akio Masuda and Mónica Montero-Lomelí An NH_2-terminal deleted plasma membrane H^+-ATPase is a dominant negative mutant and is sequestered in endoplasmic reticulum derived structures 51

David J. Claffey, Jeffrey D. Meyer, Robert Beauvais, Tessa Brandt, Eli Shefter, David J. Kroll, James A. Ruth, and Mark C. Manning Long chain arginine esters: A new class of cationic detergents for preparation of hydrophobic ion-paired complexes 59

Number 2 / numéro 2

ARTICLES

Jonathan K.L. Chan, Paul C. Park, and Umberto De Boni Association of DNAse sensitive chromatin domains with the nuclear periphery in 3T3 cells in vitro 67

Carmichael J.A. Wallace and Ian Clark-Lewis Site-specific independent double labeling of proteins with reporter atoms 79

Rajkumar Kumarathasan and Frans H.H. Leenen Is ATP a substrate for 15-lipoxygenase? 87

Holly Kupfer and Dwayne Wise The pattern of sex chromosome kinetochore phosphorylation during nonrandom segregation in a flea beetle 93

Kim-Sue R.S. Tudor, Tracy L. Deem, and Joan M. Cook-Mills Novel α4-integrin ligands on an endothelial cell line 99

Judith E. Nelson, Claudia Altschuller-Felberg, Anna Loukissa, and Christopher Cardozo Proteasome from cytokine-treated human cells shows stimulated BrAAP activity and depressed PGPH activity 115

Dan Luo, Samuel Chak-Sum Cheng, Hong Xie, and Yong Xie Effects of Bcl-2 and Bcl-X_L protein levels on chemoresistance of hepatoblastoma HepG2 cell line 119

Won Ho Kim, Kyung Hwa Kang, Mie Young Kim, and Kyung Hee Choi Induction of p53-independent p21 during ceramide-induced G1 arrest in human hepatocarcinoma cells 127

Number 3 / numéro 3

Novel Neuroendocrine Control Mechanisms in the Vertebrates
Nouveaux Mècanismes de Régulation Neuroendocrinienne Chez les Vertébrés

INTRODUCTION

Vance Trudeau Novel neuroendocrine control mechanisms in the vertebrates / Nouveaux mècanismes de régulation neuroendocrinienne chez les vertébrés 137

REVIEWS / SYNTHÈSES

John P. Chang, James D. Johnson, Fredrick Van Goor, Calvin J.H. Wong, Warren K. Yunker, Aubrey D. Uretsky, Daina Taylor, Richard M. Jobin, Anderson O.L. Wong, and Jeffrey I. Goldberg Signal transduction mechanisms mediating secretion in goldfish gonadotropes and somatotropes 139

Hajer Guissouma, Nathalie Becker, Isabelle Seugnet, and Barbara A. Demeneix Transcriptional repression of TRH promoter function by T3: Analysis by in vivo gene transfer 155

Krishnan M. Dhandapani and Darrell W. Brann The role of glutamate and nitric oxide in the reproductive neuroendocrine system 165

Mercedes Blázquez and Kathleen I.J. Shennan Basic mechanisms of secretion: Sorting into the regulated secretory pathway 181

M.J. Winter, A. Ashworth, H. Bond, M.J. Brierley, C.R. McCrohan, and R.J. Balment The caudal neurosecretory system: Control and function of a novel neuroendocrine system in fish 193

David J. Tellam, Yasmin N. Mohammad, and David A. Lovejoy Molecular integration of hypothalamo-pituitary-adrenal axis-related neurohormones on the GnRH neuron 205

James D. Johnson and John P. Chang Function- and agonist-specific Ca^{2+} signalling: The requirement for and mechanism of spatial and temporal complexity in Ca^{2+} signals 217

V.L. Trudeau, D. Spanswick, E.J. Fraser, K. Larivière, D. Crump, S. Chiu, M. MacMillan, and R.W. Schulz The role of amino acid neurotransmitters in the regulation of pituitary gonadotropin release in fish 241

Chun Peng and Spencer T. Mukai Activins and their receptors in female reproduction 261

D. Smart and M.D. Wood Cytosensor techniques for examining signal transduction of neurohormones 281

Roland P. Kuiper and Gerard J.M. Martens Prohormone transport through the secretory pathway of neuroendocrine cells 289

Muhtashan S. Mondal, Masamitsu Nakazato, and Shigeru Matsukura Orexins (hypocretins): Novel hypothalamic peptides with divergent functions 299

James D. Rose Corticosteroid actions from neuronal membrane to behavior: Neurophysiological mechanisms underlying rapid behavioral effects of corticosterone 307

Mohammed El Majdoubi, Dominique A. Poulain, and Dionysia T. Theodosis Activity-dependent morphological synaptic plasticity in an adult neurosecretory system: Magnocellular oxytocin neurons of the hypothalamus 317

Anderson O.L. Wong, Wen Sheng Li, Eric K.Y. Lee, Mei Yee Leung, Lai Yin Tse, Billy K.C. Chow, Hao Ren Lin, and John P. Chang Pituitary adenylate cyclase activating polypeptide as a novel hypophysiotropic factor in fish 329

Raphaël Métivier, Yves Le Dréan, Gilles Salbert, and Farzad Pakdel Interplay between liganded and orphan nuclear receptors controls reproductive pathways 345

Fredrick Van Goor, Lazar Z. Krsmanovic, Kevin J. Catt, and Stanko S. Stojilkovic Autocrine regulation of calcium influx and gonadotropin-releasing hormone secretion in hypothalamic neurons 359

ARTICLES

José Miguel Cerdá-Reverter and Dan Larhammar Neuropeptide Y family of peptides: Structure, anatomical expression, function, and molecular evolution 371

Stanko S. Stojilkovic, Melanija Tomic, Fredrick Van Goor, and Taka-aki Koshimizu Expression of purinergic $P2X_2$ receptor-channels and their role in calcium signaling in pituitary cells 393

Number 4 / numéro 4

REVIEW / SYNTHÈSE

M.F. Counis and A. Torriglia DNases and apoptosis 405

ARTICLES

Carol A. Faaland, T.J. Thomas, Srivani Balabhadrapathruni, Thierry Langer, Somia Mian, Akira Shirahata, Michael A. Gallo, and Thresia Thomas Molecular correlates of the action of bis(ethyl)polyamines in breast cancer cell growth inhibition and apoptosis 415

M. Varedi, E.E. Tredget, A. Ghahary, and P.G. Scott Stress-relaxation and contraction of a collagen matrix induces expression of TGF-β and triggers apoptosis in dermal fibroblasts 427

Edouard W. Khandjian and Timothy M. Rose Disruption of LT-antigen/p53 complex by heat treatment correlates with inhibition of DNA synthesis during transforming infection with SV40 437

F. Liu and T.B. Ng Effect of pineal indoles on activities of the antioxidant defense enzymes superoxide dismutase, catalase, and glutathione reductase, and levels of reduced and oxidized glutathione in rat tissues 447

Justin Flood, Janice Mayne, and John J. Robinson Identification and characterization of gelatin-cleavage activities in the apically located extracellular matrix of the sea urchin embryo 455

L.S.M. Ooi, T.B. Ng, Yunqi Geng, and V.E.C. Ooi Lectins from bulbs of the Chinese daffodil *Narcissus tazetta* (family Amaryllidaceae) 463

Biao Shi and R. Rivkah Isseroff Divergent responses of *ras*-transfected and non-*ras*-transfected human keratinocytes to extracellular calcium 469

Matthew C. Stubbs, InSung Min, Marc W. Izzo, Ravikumar Rallapalli, Assia Derfoul, and David J. Hall The ZF87/MAZ transcription factor functions as a growth suppressor in fibroblasts 477

Paweł Pomorski, Lucyna Grębecka, Andrzej Grębecki, and Robert Makuch Reversible changes in size of cell nuclei isolated from *Amoeba proteus*: Role of the cytoskeleton 487

Sandra Tribolo, Suzanne Maroux, and Dominique Massey-Harroche Kidney proximal tubule cells: Epithelial cells without EGTA-extractable annexins? 495

Robert A. Rinaldi, Barbara Kalisz-Nowak, Wlodzimierz Korohoda, Stanislaw Wieckowski, Wincenty Kilarski, and Maria Kozlowska Contractile elements of *Lemna trisulca L.* glycerinated cell models during chloroplast translocations 503

David A. Hart, Carol Reno, Marie-Pierre Hellio Le Graverand, Lisa Hoffman, and William Kulyk Expression of heat shock protein 47(Hsp47) mRNA levels in rabbit connective tissues during the response to injury and in pregnancy 511

Waheed Sangrar and Marlys L. Koschinsky Characterization of the interaction of recombinant apolipoprotein(a) with modified fibrinogen surfaces and fibrin clots 519

NOTE

James Lo and Robert A.R. Hurta Transforming growth factor β_1 selectively regulates ferritin gene expression in malignant H-ras-transformed fibrosarcoma cell lines 527

Number 5 / numéro 5

Proceedings of the Tenth Winternational Symposium of the Canadian Society of Biochemistry and Molecular & Cellular Biology: Genes & Development

Actes du Dixième Symposium Internationeige de la Société Canadienne de Biochimie et de Biologie Moléculaire et Cellulaire : Gènes et développement

MINI-REVIEWS / SYNTHÈSES

Barbara Vanderbeld and Gregory M. Kelly New thoughts on the role of the $\beta\gamma$ subunit in G protein signal transduction 537

Carol L. Armstrong and Richard Hawkes Pattern formation in the cerebellar cortex 551

Sarah McFarlane Attraction vs. repulsion: The growth cone decides 563

Timothy E. Kennedy Cellular mechanisms of netrin function: Long-range and short-range actions 569

Ivor Mason, David Chambers, Huma Shamim, Jennifer Walshe, and Carol Irving Regulation and function of FGF8 in patterning of midbrain and anterior hindbrain 577

William J. Brook Hedgehog signaling and the axial patterning of *Drosophila* wings 585

Ted Zerucha and Marc Ekker *Distal-less*-related homeobox genes of vertebrates: Evolution, function, and regulation 593

Jennifer Bonner and Timothy P. O'Connor Semaphorin function in the developing invertebrate peripheral nervous system 603

Fiona C. Mansergh, Michael A. Wride, and Derrick E. Rancourt Neurons from stem cells: Implications for understanding nervous system development and repair 613

D. Alan Underhill Genetic and biochemical diversity in the *Pax* gene family 629

ABSTRACTS / RÉSUMÉS

Jo Begbie and Anthony Graham The induction of epibranchial placodes in the chick 639

S.S. Blair Compartments, boundaries, and lineage in the developing wing of *Drosophila melanogaster* 639

Mark Bothwell and Sana Karam Eph function in cerebellar development 640

W.J. Brook Pattern formation in the anterior posterior axis of fruit-fly limbs 640

S.D. Campbell, D. Price, S. Rabinovitch, and Z. Jin Cellular syncytium to cells: Novel regulatory mechanisms observed in Drosophila embryos 641

Ian Chin-Sang, Sean George, Sarah Moseley, Tom Holcomb, Mei Ding, and Andrew Chisholm Ephrin signaling in *Caenorhabditis elegans* neural and epidermal morphogenesis 641

Thomas R. Clandinin and S. Lawrence Zipursky Neuronal target selection by photoreceptor axons in *Drosophila melanogaster* 642

Joe Culotti, Bruce Nash, Hong Zheng, and Takehiro Kawano Axon guidance mechanisms in *Caenorhabditis elegans* 642

M. Ekker, T.S. Zerucha, T. Stühmer, G. Hatch, B.K. Park, Q. Long, and J.L.R. Rubenstein Cross-regulatory interactions between *Dlx* genes in the embryonic forebrain 643

Richard Hawkes Pattern formation in the developing cerebellum 643

Robin A. Kimmel, Daniel H. Turnbull, Veronique Blanquet, Wolfgang Wurst, Cynthia A. Loomis, and Alexandra L. Joyner Two lineage boundaries and *En1* coordinate AER formation 644

Timothy E. Kennedy The ontogeny of everyday life: Netrin function in the developing and adult nervous system 644

Oona Johnstone, Miltiadis Paliouras, Jarred Chicoine, and Paul Lasko Translational control in the Drosophila germ line 645

Ivor Mason, David Chambers, Carol Irving, Huma Shamim, and Jennifer Walshe Roles of FGF signalling in regional specification of midbrain and anterior hindbrain 645

W. Materi and D. Pilgrim Characterization of the UNC-119 protein and its role in axonogenesis in *Caenorhabditis elegans* 646

S. McFarlane Axon guidance in the developing visual system 646

R.R. McInnes, D.J. Horsford, R. Chow, L. Ploder, E.F. Percin, J.J. Yu, T. Erclik, R.L. Chow, E. Traboulsi, M. Sarfarazi, D. van der Kooy, and H. Lipshitz The *CHX10* homeobox gene in eye development: human mutations, downstream targets, and mouse and fly homologues 647

C.B. Moens, H. Pöpperl, H. Chang, and H. Rikhoff Lazarus is a novel *pbx* gene required for *hox* function in zebrafish 647

Randall T. Moon A post-fertilization asymmetry in beta catenin accumulation regulates dorsal axis formation in *Xenopus laevis* 648

Timothy P. O'Connor Axon guidance by the combinatorial action of a secreted and transmembrane semaphorin 648

C. Schubert, J. Schisa, J. Pitt, and J. Priess Germline/soma asymmetry in *Caenorhabditis elegans* 649

T.A. Reh, A. Fischer, S. Fuhrmann, and K. McCabe Studies of retinal development and regeneration: patterning and re-patterning the retina 649

J. Rossant, B. Ciruna, T. Kunath, C.-A. Mao, and D. Strumpf Conserved pathways of FGF action in trophoblast and mesoderm development 650

Gary Ruvkun The taxonomy of animal developmental control genes revealed by the first complete animal genome sequence 650

Alexa Smith and Anthony Graham Morphogenetic cell death in rhombencephalic neural crest 651

Samuel Weiss, Andrew Chojnacki, and Takuya Shimazaki Cytokine regulation of neural stem cell fate in the developing mouse CNS 651

Number 6 / numéro 6

ARTICLES

Young-sam Lee, Sung-tae Kim, Gyoung-won Kim, Minhyung Lee, and Jong-sang Park An engineered *lox* sequence containing part of a long terminal repeat of HIV-1 permits Cre recombinase-mediated DNA excision 653

Tatsuya Yoshimi, Yuji Takahashi, Shigeru Takahashi, and Takashi Miura Changes in lung-specific molecular expression during differentiation of hamster embryonic M3E3/C3 cell line 659

Sylvie Gélinas, Camille Chapados, Marc Beauregard, Isabelle Gosselin, and Maria-Grazia Martinoli Effect of oxidative stress on stability and structure of neurofilament proteins 667

J.M. Stewart, J.A. Blakely, and M.D. Johnson The interaction of ferrocytochrome *c* with long-chain fatty acids and their CoA and carnitine esters 675

Elzbieta Wyroba and Birgit H. Satir A comparative hybridization analysis of yeast DNA with *Paramecium* parafusin- and different phosphoglucomutase-specific probes 683

Cristina Pérez-Gómez, José M. Segura, Miguel Blanca, Maite Asenjo, and José M. Matés Antioxidant activity levels and oxidative stress as blood markers of allergic response to drugs 691

H.X. Wang and T.B. Ng Flammulin: A novel ribosome-inactivating protein from fruiting bodies of the winter mushroom *Flammulina velutipes* **699**

Sharon Soodeen-Karamath and Ann M. Verrinder Gibbins The chicken *stathmin* gene and its expression in the embryo **703**

John P. Williams, Margaret A. McKenna, Allyn M. Thames III, and Jay M. McDonald Tamoxifen inhibits phorbol ester stimulated osteoclastic bone resorption: An effect mediated by calmodulin **715**

NOTE

Francis Choy, Lisa Sharp, and Derek A. Applegarth Glycine cleavage enzyme complex: Rabbit H-protein cDNA sequence analysis and comparison to human, cow, and chicken **725**

Editorial / Éditorial **iii**

Obituary / Nécrologie **iv**

Author Index for Volume 78 / Index des auteurs pour le volume 78 **AI-1**

Contents for Volume 78 / Sommaire pour le volume 78 **C-1**